

Appl. No. 09/817,641
Amendment Dated January 3, 2005
Reply to Office Action of November 3, 2004

AMENDMENT OF THE CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

- 1 1. (Currently Amended) A first switch system capable of communicating
2 with a second switch system, comprising:
3 a storage element to store information indicating at least one available
4 trunk for originating a call with the second switch system; and
5 a controller adapted to determine if the indicated at least one available
6 trunk is likely to be used by the second switch for call origination, and
7 [[if]] in response to determining that the at least one available trunk is
8 likely to be used by the second switch, the controller adapted to select another trunk for
9 call origination.

- 1 2. (Original) The first switch system of claim 1, wherein the storage element
2 comprises a main queue and a shadow queue, the main queue to store identifiers of
3 available trunks and the shadow queue to store identifiers arranged in an order to track
4 storage of identifiers of available trunks in the second switch.

- 1 3. (Original) The first switch system of claim 2, wherein the main queue is
2 adapted to use one of a most idle (MIDL) algorithm and a least idle (LIDL) algorithm
3 that is a counterpart of the other one of the MIDL algorithm and LIDL algorithm for a
4 queue in the second switch.

- 1 4. (Original) The first switch system of claim 2, wherein the main queue and
2 shadow queue are adapted to employ different algorithms for storing identifiers of
3 available trunks.

- 1 5. (Original) The first switch system of claim 4, wherein the controller is
2 adapted to select one trunk for a call origination, the controller adapted to remove an
3 identifier of the one trunk from the shadow queue and the main queue.

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1 6. (Original) The first switch system of claim 5, wherein the controller is
2 adapted to return an identifier of a released trunk to the shadow queue and the main
3 queue.

1 7. (Original) The first switch system of claim 6, wherein the controller is
2 adapted to return the identifier of the released trunk to a first end of the main queue and
3 to an opposite end of the shadow queue.

1 8. (Currently Amended) The first switch system of claim 7, wherein the
2 controller is adapted to select the one trunk based on an identifier in ~~from~~ a first entry of
3 the main queue, the controller adapted to further compare an the identifier in the first
4 entry with an identifier in a corresponding entry in the shadow queue to determine if the
5 one ~~first~~ trunk is likely to be selected by the second switch.

1 9. (Currently Amended) The first switch system of claim 2, wherein the main
2 queue is adapted to use one of an ascending sequential (ASEQ) algorithm and descending
3 sequential (DSEQ) algorithm that is a counterpart of another ~~the other~~ one of the ASEQ
4 algorithm and DSEQ algorithm for a queue in the second switch.

1 10. (Original) The first switch of claim 2, wherein the main queue is adapted
2 to use one of a clockwise circular trunk hunting (CWH) algorithm and a counter-
3 clockwise circular trunk hunting (CCWH) algorithm that is a counterpart of the other one
4 of the CWH algorithm and CCWH algorithm for a queue in the second switch.

1 11. (Original) The first switch system of claim 1, the storage element further
2 to store information for tracking trunk selection in the second switch.

1 12. (Original) The first switch system of claim 11, wherein the controller is
2 adapted to use a first algorithm for selecting a trunk that is a counterpart of a second,
3 different algorithm for selecting a trunk in the second switch.

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1 13. (Original) The first switch system of claim 12, wherein the first algorithm
2 is selected from the group consisting of the MIDL, LIDL, ASEQ, DSEQ, CWH, CCWH
3 algorithms.

1 14. (Currently Amended) An article comprising at least one storage medium
2 containing instructions that when executed cause a first switch system that is coupled to a
3 second switch system to:
4 maintain a first queue containing identifiers of available trunks;
5 arrange the identifiers of the first queue in a first arrangement;
6 maintain a second queue containing the identifiers of available trunks;
7 arrange the identifiers of the second queue in a second, different
8 arrangement; and
9 select a trunk in response to a call origination based on the first and second
10 queues, wherein selecting the trunk includes:
11 selecting a first trunk from available trunks in the first queue; and
12 using the second queue to predict if the first trunk selected from
13 the first queue will conflict with a trunk to be selected by the second switch system.

1 15. (Original) The article of claim 14, wherein the instructions when executed
2 cause the first switch system to arrange the identifiers of the second queue in the second
3 arrangement that is consistent with an arrangement of a queue in a second switch system
4 coupled to the first switch system over a set of trunks.

1 16. (Previously Presented) The article of claim 15, wherein the instructions
2 when executed cause the first switch system to select the trunk by comparing an entry of
3 the first queue with an entry of the second queue to predict if a conflict with the second
4 switch system will occur.

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1 17. (Original) The article of claim 16, wherein the instructions when executed
2 cause the first switch system to further remove an identifier of a selected trunk from the
3 first and second queues.

1 18. (Original) The article of claim 17, wherein the instructions when executed
2 cause the first switch system to further return an identifier of a released trunk to a first
3 end of the first queue and to an opposite end of the second queue.

1 19. (Original) The article of claim 14, wherein the instructions when executed
2 cause the first switch system to arrange the identifiers of the first queue using one of an
3 MIDL arrangement and LIDL arrangement and to arrange the identifiers of the second
4 queue using the other one of the MIDL and LIDL arrangements.

1 20. (Original) The article of claim 14, wherein the instructions when executed
2 cause the first switch system to arrange the identifiers of the first queue using one of an
3 ASEQ arrangement and DSEQ arrangement and to arrange the identifiers of the second
4 queue using the other one of the ASEQ and DSEQ arrangements.

1 21. (Original) The article of claim 14, wherein the instructions when executed
2 cause the first switch system to arrange the identifiers of the first queue using one of an
3 CWH arrangement and CCWH arrangement and to arrange the identifiers of the second
4 queue using the other one of the CWH and CCWH arrangements.

1 22. (Original) A method of selecting a circuit for call origination between a
2 first switch and a second switch, comprising:
3 maintaining a first list of available circuits in the first switch;
4 tracking a second list of available circuits in the second switch; and
5 selecting a circuit for call origination based on the first list and the
6 tracking of the second list.

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1 23. (Original) The method of claim 22, wherein tracking the second list is
2 performed without communicating information regarding the second list from the second
3 switch to the first switch.

1 24. (Original) The method of claim 22, wherein tracking the second list is
2 performed locally in the first switch without knowledge of a content of the second list.

1 25. (Original) The method of claim 22, further comprising using an algorithm
2 for updating the first list that is different than an algorithm for the second list.

1 26. (Original) The method of claim 22, wherein maintaining the first list
2 comprises providing a first queue and tracking the second list comprises providing a
3 shadow queue.

1 27. (Original) The method of claim 26, further comprising removing an
2 identifier of a selected circuit from the first queue and the shadow queue.

1 28. (Original) The method of claim 27, further comprising returning an
2 identifier of a released circuit to the first queue and the shadow queue.

1 29. (Original) A data signal embodied as a carrier wave and comprising
2 instructions that when executed cause a system to:
3 maintain a first list of available trunks in a first switch;
4 track a second list of available trunks in a second switch coupled to the
5 first switch over a set of trunks; and
6 select a trunk for call origination in the first switch using the first list and
7 tracking of the second list.

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1 30. (Currently Amended) A first switch system capable of communicating
2 with a second switch system over a set of trunks, comprising:
3 a first queue containing identifiers of trunks available for originating a call
4 with the second switch system;
5 a shadow queue containing identifiers of trunks available for originating a
6 call with the second switch system, the identifiers of the first queue arranged according to
7 a first algorithm and the identifiers of the shadow queue arranged according to a second,
8 different algorithm; and
9 trunk selection logic adapted to select an available trunk using the first
10 queue and the shadow queue, the trunk selection logic adapted to access the shadow
11 queue to determine if a selected trunk from the first queue is likely to be used by the
12 second switch for call origination, and
13 [[if]] in response to determining that the available trunk is likely to be
14 used by the second switch, ~~the controller~~ trunk selection logic adapted to select another
15 trunk for call origination.

1 31. (Cancelled)

1 32. (Currently Amended) The article of claim 14, wherein selecting the trunk
2 further includes selecting another trunk from the first queue in response to predicting that
3 the first trunk selected from the first queue will conflict with a trunk to be selected by the
4 second switch system.

1 33. (Cancelled)